



touch

Alarm over IP

IRIS Touch Home Installation Manual

Version 1.0 ENGLISH

Now certified
and compliant with
EN50131, EN50136
Security Grade 4
ATS6

1. Introduction

No more bulky batteries, just one sleek unit with 24 hours or more runtime after mains failure

To meet the rapidly increasing demand for cost effective Alarm over IP (AoIP) equipment for the SME and home markets, Chiron has developed the IRIS Home unit based on its successful IRIS Touch 100 and Touch 200 ranges.

By using advanced software intelligence and power management the IRIS Touch units can offer 24 hours or more for Grade 2/3 alarm systems, without the need for bulky batteries. The unit can be powered from a mains supply, or the battery of an alarm panel. In the case of external mains power failure, the alarm battery backup will not be used and internal IRIS Touch Home batteries take over. The sleek unit offers all the benefits and features of other diallers in the IRIS Touch range, including remote access for Upload/Download.

The IRIS Touch Home can be supplied in three forms: Home 00, Home 20 and Home 40. All come with a fit and forget solution.

There are three models in the IRIS Touch Home family for single path or dual path transmission.

Feature	IRIS Touch Home 00	IRIS Touch Home 20	IRIS Touch Home 40
Stylish, tamper proof enclosure	✓	✓	✓
Easy to install and test with touch screen interface	✓	✓	✓
2-wire (POTS) dial capture interface to alarm panel	✓	✓	✓
SIA (1-3), CID, Scancom and Robofon protocols	✓	✓	✓
Secure polling and alarm transmission over IP	✓	✓	✓
Dual path			✓
Security grade compliance	Grade 2	Grade 2	Grade 2
USB port for local configuration	✓	✓	✓
Pin inputs for alarm messages over IP	2	2	2
Pin inputs for alarm messages over SMS	✓	✓	✓
Configuration and diagnostics over IP	✓	✓	✓
Smart identification of panel power loss	✓	✓	✓
Advanced software control of power consumption	✓	✓	✓
4 Powering options:			
From alarm auxiliary output	✓	✓	✓
From alarm panel supply	✓	✓	✓
From alarm battery	✓	✓	✓
From mains adapter	✓	✓	✓

Feature	IRIS Touch Home 00	IRIS Touch Home 20	IRIS Touch Home 40
Battery run time after mains power failure			
Ethernet only, polling 15 minutes or longer		24 hours +	18 hours +
GPRS only, polling 15 minutes or longer	24 hours +		18 hours +
Dual path, polling 15 minutes or longer			18 hours +
Battery recharge from discharge	56 hours	56 hours	56 hours
Off the shelf NiMH AA size rechargeable batteries	✓	✓	✓
Low battery alerts to monitoring centres	✓	✓	✓

Figure 1

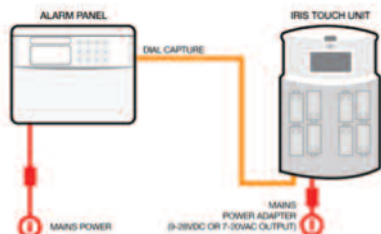


Figure 2

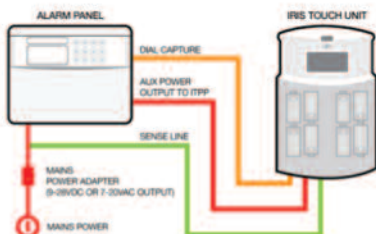


Figure 3

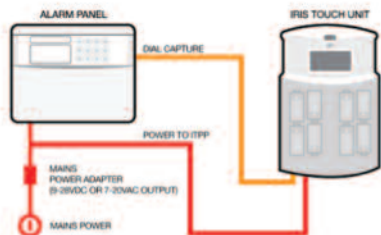


Figure 4

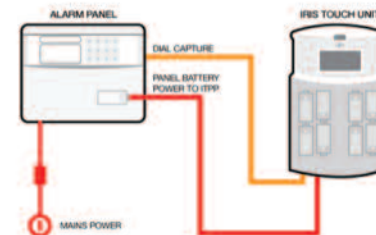


Figure 5

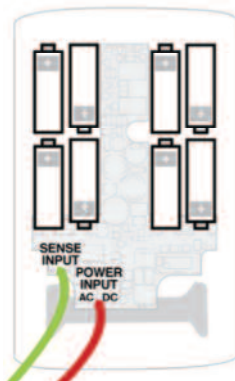
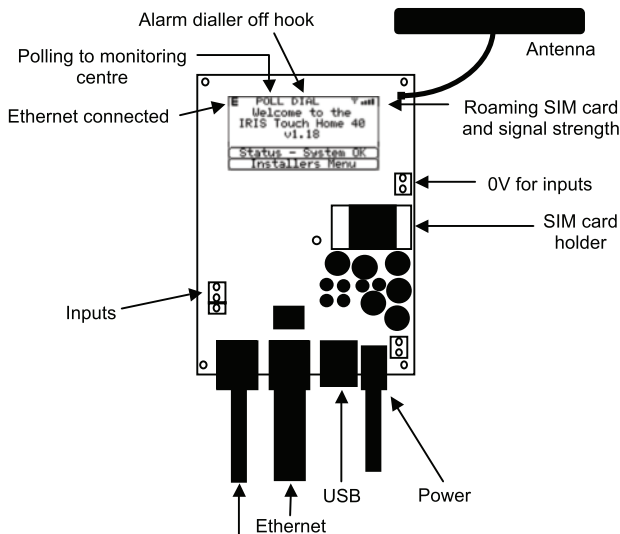


Figure 6



2. Configuration options

The IRIS range of alarm dialers allows alarm systems to move into fixed line (Ethernet) and/or wireless networks (GPRS) without the need to upgrade or replace the alarm system. In some smaller alarm panels however the battery backup within the panel is not sufficient to power both the panel and an IRIS Touch dialler for a continued period of operation once mains power is lost. The IRIS Touch Home enhances the IRIS Touch range by providing both the power and battery backup supply in a single unit.

The IRIS Touch Home offers various power supply and battery charging options:

2.1. Powering from an independent mains adapter

Power is provided from a separate DC mains power adapter provided for use with the IRIS Touch Home. This mode can be used where a mains power socket is available. The mains adapter should be specified to deliver up to 1A at 9-28V DC or 7V-20V AC.

Please refer to [Figure 1](#)

2.2. Intelligent powering from an alarm panel AUX output

This uses an auxiliary power output from the panel (such as that used to power a siren). This is intelligently controlled by the IRIS Home with power only being taken when mains power to the alarm panel is available. This avoids the alarm panel battery life being shortened during mains power failure. This mode can be used where the alarm panel has an auxiliary DC power output of 9V to 35V DC that can deliver at least 500mA above the requirements of any other attached device.

Please refer to [Figure 2](#)

2.3. Intelligent powering from the panel mains adapter

Power is provided via the low voltage AC or DC adapter used by the alarm panel. Because the IRIS Touch Home senses the output voltage level of the alarm panel mains adapter, it draws no current while the panel power supply is fully loaded. In this mode the power input to the alarm panel must be accessible and has a connector for an additional cable. This mode can be used where 500mA more than that required by the panel itself can be delivered by the adapter.

Please refer to [Figure 3](#)

2.4. Intelligent powering from the alarm panel battery charger

Power will only be taken when mains power to the alarm panel is available, preventing alarm panel battery life being shortened during mains power failure. This mode can be used where the alarm panel uses a 12V battery, the charger can deliver more than 500mA, leaves its battery on charge at all times and does not have its own intelligent battery charging mode. Please consult the alarm panel supplier if in doubt. This method will affect the recharge time of the alarm panel battery.

Please refer to [Figure 4](#)

3. Before you start...

3.1. Monitoring Centre

Make sure that the monitoring centre to which the IRIS Touch Home will send alarm signals is equipped with the appropriate IRIS receiving system. The following information should be obtained from the monitoring centre.

- Dialler account number
- Monitoring centre IP address

3.2. GPRS SIM Card and Access Point Name

If the installation uses GPRS then a SIM card will be required. The IRIS Touch Home will also need to be given a GPRS 'Access Point Name' (APN). This can be obtained from the SIM card provider.

3.3. Batteries

The IRIS Touch Home requires 8 x 1.5V NiMh AA size rechargeable batteries (not included). The required battery capacity is 2050mAh minimum and ideally they should feature low self-discharge. Batteries must be approved to IEC61951-2 (EN61951-2).

Recommended manufacturers/types are:

- GP ReCyko 210AAHCB
- Annsman maxE 2100

Other battery types - including non-rechargeable batteries - must not be used.

3.4. Package contents

- IRIS Touch Home plastic housing fitted with the dialler PCB, PSU PCB, power and interconnect cables.
- 3 x screws and plugs for fixing the housing to a flat surface.
- Antenna
- Ethernet cable
- Stylist
- RJ11 cable (Dial Port)
- 18k ohms sense resistor

3.5. Ferrites

If the installation is in a residential environment you will need to fit ferrite chokes to the Ethernet cable if used. This is required to ensure compliance with EMC Class B emissions. Suitable ferrites can be obtained from Chiron.

4. Installing the IRIS Touch Home

Use the following procedure to install the IRIS Touch Home. The procedure below describes that used for dual path operation. Where single path is being used please step over the instructions for the path not being used (Ethernet or GPRS).

Refer to **Figures 5** and **6** for cabling and connections.

1. Determine which powering mode to use (see above).

Do not apply power to the dialler until indicated.

2. Decide where to run the cables

Decide the best way to run the cables that will be required. Panel dialler interface cable, Ethernet cable and/or GSM Antenna.

This can be either:

- Behind the unit (through the wall).
- Through the bottom of the back plate of the unit via the 'knock outs'.

3. Disassemble the IRIS Touch Home

Remove the two case fixing screws and open the unit and remove the IRIS Touch dialler PCB.

Note:

The IRIS Touch PCB is retained by two clips located at the bottom of IRIS Touch PCB.

4. Mount the housing on the wall

Position the IRIS Touch Home housing on the wall. Drill three holes, put the cables through the opening at the base of the plate, or via the 'knockouts', and secure the plate to the wall with the three screws supplied.

5. Fit the batteries

Fit the eight batteries, taking care that the orientation is correct. This is shown in **Figure 5**.

6. Plug in the connectors

Please refer to **Figure 6**

Do not connect the power source or apply power until later.

- Mode 1) Use a DC mains power adapter and wire to the DC input of the IRIS Touch Power Home PSU PCB board.
- Mode 2) Wire the panel auxiliary output to the DC input of the IRIS Touch Home charger board.

Fit a separate cable from the Sense input of the charger board, to either the alarm panel input from its own mains adapter or from a configurable output from the alarm panel that will signal AC fail. Please observe that the Sense input is only suitable for low voltage DC (max 28V) or AC (max 20V).

- Mode 3) (DC or AC) Wire the output of the panel mains adapter (500mA at 9-28V DC or 7V-20V AC) to the DC or AC (as appropriate) input of the IRIS Touch Home PSU PCB board.
- Mode 4) Wire the output of the panel battery charger to the DC input of the IRIS Touch Home charger board.

7. Fit the tamper switch springs

The IRIS Touch Home is protected against tampering (e.g. removal from the wall or opening of the case) by two tamper switches on either side of the dialler PCB. These switches are held by springs that press against the wall and the top cover. Before fitting the unit, make sure the springs are fitted correctly to the tamper switches.

8. Fit the PCB to the back plate

Fit the PCB to the back plate, by sliding under the hooks at the top and pushing into the catches at the bottom. Unlike the standard IRIS Touch dialler, screws are not required.

Ensure that the rear tamper spring is located within the tamper tube.

9. Connect relevant cables to the IRIS Touch PCB

- Ribbon cable from PSU PCB to IRIS Touch PCB
- Power connection from PSU PCB to IRIS Touch PCB
- Ethernet cable (cream) (Ethernet only).
- Dialler cable (grey).
- GSM antenna (GPRS only).

Note the final positioning of the antenna is determined by a successful network scan to be performed as part of the configuration of the IRIS Touch dialer.

10. Fit the SIM card (GPRS only)

10. Fit the SIM card (GPRS only)

Fit the SIM card.

11. Plug in the external cables

■ Plug the dialler cable into the alarm panel dialler. If the alarm panel has screw connections, cut the connector off the cable and strip the cable using the 2 inner wires. Polarity is not important in this instance.

■ Plug the Ethernet cable into the local IP router or socket that has been allocated for the IP connection.

12. Plug in the sense resistors

Fit the 18K sense resistor in parallel with the dialler output of the alarm panel, at the alarm panel end of the cable.

Note: This resistor enables the IRIS Touch dialler to detect cable faults and/or tampers and must be fitted at the alarm panel end of the cable to function correctly.

13. Fit the front cover

Slot the top of the front cover into the top of the back plate and click the bottom of the front cover to the bottom of the back plate. Fix in place with the two screws provided.

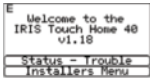

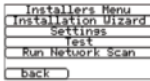
Pull down the slider to reveal the touch screen.

14. Apply power to the input of the IRIS Touch Home

To confirm power is applied the indicator LED at the top of the IRIS Touch dialler is either steady or flashing.

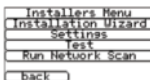
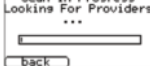
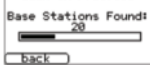
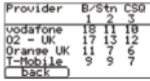
5. Entering the Installers Menus

On first power up the installer is prompted to select the language required. From there the installer menus can be accessed:

	Select "Installers Menu".
	The default installer code is "111111". Select "OK"
	It is recommended that this default is changed, which can be done by selecting "Settings" and then scrolling to "Installers Password".

6. GPRS Network Scan

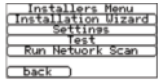
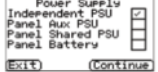
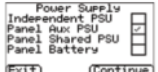
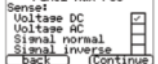
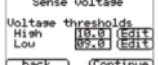
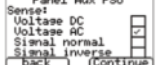
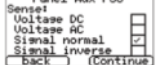

It is strongly recommended that this scan is carried out to ensure there is sufficient network coverage from at least two wireless base stations to warrant a reliable connection.

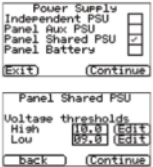
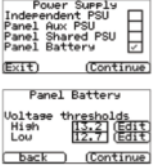




	Select "Run Network Scan". This scan must be carried out <i>without</i> the SIM card fitted. <i>Always remove power from the dialler before fitting or removing the SIM card</i>
	The dialler listens for every base station in range, requests operator name and records the signal strength. This will take a few minutes.
	It is recommended that for the chosen network (SIM card) used there should be at least 2 base stations with signal strength (CSQ) of 10 or more
	Reposition the antenna or use a higher gain antenna (if necessary).

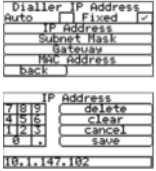
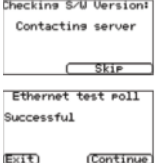
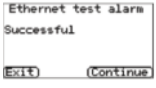
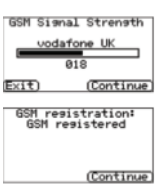



7. Installation Wizard

The Installation wizard guides you through the set up process.

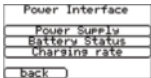
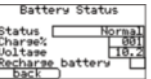
The wizard informs you of successful progress as you go along and in general select “Continue” to carry on. If there is a problem you will be told what it is and not allowed to continue until it is solved.

	<p>Select “Installation Wizard”</p> <p>There are 4 powering modes for the IRIS Touch Home. The setup is described below for each of these.</p>
	<p><u>Mode 1) Powered from an independent mains adapter</u></p> <p>Tick ‘Independent PSU’ and select ‘back’. No other settings are required.</p>
	<p><u>Mode 2) Powered from alarm panel auxiliary output</u></p> <p>The IRIS Touch Home is powered from the alarm panels auxiliary output, tick ‘Panel AUX supply’ and then select ‘Continue’.</p> <p>Then select the appropriate option given below:</p>
	<p><u>Sense Pin wired to Alarm Panels low voltage DC supply</u></p> <p>If the Sense input pin of the IRIS Touch Home is wired to extend low voltage DC supply, tick ‘Voltage DC’ followed by ‘Continue’.</p>
	<p>The IRIS Touch Home will monitor the voltage at the sense input pin and when the voltage is below the ‘Low’ threshold it will run off its own internal batteries. No power will be taken from the alarm panel until the voltage goes above the ‘High’ threshold.</p> <p>The threshold ‘High’ and ‘Low’ can be altered by selecting ‘Edit’.</p>
	<p><u>Sense Pin wired to Alarm Panels low voltage AC supply</u></p> <p>If the Sense input pin of the IRIS Touch Home is wired to the panel’s low voltage AC power supply of the alarm panel, tick ‘Voltage AC’. The IRIS Touch Home then detects if AC is being supplied to the panel, and determines whether to run from its internal battery.</p>
 	<p><u>Sense Pin wired to Alarm Panels EPS failure output</u></p> <p>If the Sense input pin of the IRIS Touch Home is wired to an output of the alarm panel that indicates EPS failure, tick ‘Signal normal’. When the output is a positive voltage the IRIS Touch Home will be powered from the panel, and when the voltage is low the IRIS Touch Home will run from batteries. Should you need to invert the operation/signal, tick ‘Signal inverse’.</p>

	<p><u>Mode 3) Powered from shared panel mains adapter</u></p> <p>If the IRIS Touch Home unit is powered from the alarm panels low voltage AC or DC supply, tick 'Panel Shared PSU' and select 'Continue'. The IRIS Touch Home will measure its input voltage and when the voltage is below the 'Low' threshold the IRIS Touch Home will run of its own internal batteries. No power will be taken from the alarm panel until the voltage goes above the 'High' threshold.</p> <p>The threshold 'High' and 'Low' can be altered by selecting 'Edit'.</p>
	<p><u>Mode 4) Powered from alarm panel battery</u></p> <p>If the IRIS Touch Home unit is powered from the alarm panel's battery, tick 'Panel Battery' and select 'Continue'.</p> <p>The IRIS Touch Home will measure its input voltage and when the voltage is below the 'Low' threshold the IRIS Touch Home will run on its own internal batteries. No power will be taken from the alarm panel battery until the voltage goes above the 'High' threshold. The threshold 'High' and 'Low' can be altered by selecting 'Edit' if required.</p>
	<p>Select the network connection(s) to be used. For dual path, select both. "Monitor Dial Port" should always be selected. This requires the 18K ohm resistor (provided) to be connected at the alarm panel end of the dial capture cable. If the alarm panel is not partitioned with multiple account numbers, "Alarm Override" is selected as this means no changes are required to the settings within the alarm panel.</p> <p>If you are using a SIM card that can roam between networks (Roaming SIM) is being used, select it here to give increased reliability of communications.</p>
	<p>Select "Set" and enter the account name allocated by the monitoring centre.</p> <p>Select "Save" when done.</p>
	<p>If "Alarm Override" has not been selected, then the phone number set in the alarm panel for the monitoring centre must be changed to the IP address of the monitoring centre. This must be in 12 digit format (in this case 10.1.2.36 becomes 010001002036).</p> <p>Select "Save" when done.</p>
	<p>If connection via Ethernet is selected, the dialler checks it is connected. Select "Continue".</p> <p>In most situations the dialler will receive its own IP address automatically (DHCP) from the local router.</p>

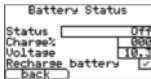
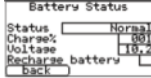
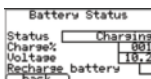
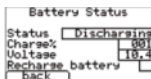
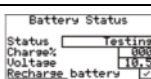
	<p>Select “Fixed” if the dialler is to be given a fixed IP address.</p> <p>If a fixed IP address is required, tick “Fixed” and then in turn click on “IP Address”, “Subnet Mask” and “Gateway”. All three must be configured. These can be obtained from the local IT department.</p> <p>The IRIS Touch will then check the IP address is a valid format.</p>
	<p>The IRIS Touch will also check with Chiron’s global reflash server to see if a new version is available. If so we would recommend upgrading.</p> <p>Each dialler regularly sends a ‘poll’ to the monitoring centre to check the connection. This confirms that polls can get through.</p>
	<p>A test alarm is sent from the dialler as well.</p> <p>Note – the normal sequence of sending test alarms from the alarm panel must still be carried out.</p>
	<p>If connection via GPRS is selected, the dialler will display the signal strength.</p> <p>The dialler checks that there is registration with the GPRS network.</p>
	<p>All GPRS networks require the Access Point Name (APN) to be set. A few also require User Name (USR) and Password (PWD). Select “Change” to configure.</p> <p>Select the item to be changed.</p>
	<p>The IRIS Touch will make a test poll and test alarm transmission over GPRS.</p> <p>Note – the normal sequence of sending test alarms from the alarm panel must still be carried out.</p> <p>The dialler has inputs that can be used to send alarms or text messages independent to the alarm panel. Select “Yes” if required.</p> <p>Setup of the dialler is completed successfully</p>
	<p>You are now ready to test normal alarm transmission from the alarm panel to the monitoring station, and verify these are successfully received by the monitoring station.</p>

8. Changing Batteries

	<p>When new batteries are installed, the IRIS Touch Home should be instructed to carry out a full charge of the batteries.</p> <p>Go to 'Settings' and select the 'Power Interface' menu, then select 'Battery Status'</p>
	<p>Then tick 'Recharge battery' and the battery charge counter will be reset to 000 and a new charge will begin.</p>

9. Checking Status

There are five states the IRIS Power Home can be operating in – these are explained below:

	<p><u>Battery off</u></p> <p>The 'Battery off' state as shown under the Battery Status screen can indicate that the Power Pack is not enabled, the batteries are not present or the battery deep discharge protection has been triggered.</p>
	<p><u>Battery Normal</u></p> <p>The 'Battery Normal' state indicates the IRIS Touch Home is healthy.</p>
	<p><u>Battery Charging</u></p> <p>The 'Battery charging' state indicates the batteries are being charged. This can be initiated by enabling the Power Pack mode, ticking 'Recharge Battery' or a regular top up charge to maintain the batteries.</p>
	<p><u>Battery Discharging</u></p> <p>The 'Battery discharging' state indicates that the IRIS Touch Home is running from batteries. This could be due to the input power being not present or the IRIS Touch Home detecting mains failure and / or loading of the external power supply.</p>
	<p><u>Battery Testing</u></p> <p>The 'Battery testing' state indicates the IRIS Touch Home is testing the batteries health.</p>

10. Maintenance Recommendations

The batteries should be routinely replaced every two years.

When the batteries are replaced, the installer must tick the 'New Battery' tick box found in the Battery Status section within the Power Interface settings

Appendix A. Specification

Power Supply	
Supply voltage	9V to 28V DC (DC terminal) or 7V to 20V AC (RMS) (AC terminal)
Typical current consumption with IRIS Touch dialler attached not charging (Charging rate low)	200mA @ 12V DC
Peak current consumption with IRIS Touch dialler attached and 56 hour charging (Charging rate low)	500mA @ 12V DC
Typical current consumption with IRIS Touch dialler attached not charging (Charging rate high)	300mA @ 12V DC
Peak current consumption with IRIS Touch dialler attached and 28 hour charging (Charging rate high)	800mA @ 12V DC
Weights	
IRIS Touch Home unit (without batteries)	0.9Kg
Fully packaged (batteries not included)	1.04Kg

Conformance

The IRIS Touch Home complies with the following European Directives:

- 1999/5/EC (Radio & Telecoms Terminal Equipment Directive)
- 2006/95/EC (Low Voltage Directive)
- 2004/108/EC (Electromagnetic Compatibility Directive)

Safety

Care should be taken when interconnecting telecommunications equipment that only like interfaces are interconnected to avoid safety hazards.

SELV:	SELV (Safety Extra-Low Voltage) is defined as a secondary circuit which is so designed and protected that under normal and single fault conditions the voltage between any two accessible parts does not exceed a safe value (42.4V peak or 60V dc maximum)
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The interfaces on the IRIS Touch Home have the following safety classifications:

- Dial capture interface: SELV suitable for connection to the TNV interface of single line telecommunications equipment such as telephones faxes, etc.
- Power Interface: SELV for connection to a DC or AC supply
- Inputs: SELV for connection to alarm output pin

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